In re Application of BEDA et al.
Serial No. 10/693,633

REMARKS

The Office action has been carefully considered. The Office action rejected claims 1-62 under 35 U.S.C. § 101 as being non-statutory subject matter. Further, the Office action rejected claims 6-62 under 35 U.S.C. § 112, second paragraph as being indefinite. Further yet, the Office action rejected claims 1 and 36 under 35 U.S.C. § 102(b) as being anticipated by a mental process in a human being. Still further, the Office action rejected claim 1-62 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication 2003/012983 to Kim et al. ("Kim") in view of U.S. Patent Publication 2004/0110490 to Steele et al. ("Steele") and in further view of *Scalable Vector Graphics specification version 1.1* revised January 14, 2003 ("SVG"). Finally, the Office action noted various informalities and claim numbering issues which have been addressed herein. Regarding the claim rejections, applicants respectfully disagree.

Please note that the original claims as filed were numbered incorrectly. The Office action objected to the numbering as incorrect, specifically that the numbers 55 and 63-64 in the claim numbering were skipped. Applicants have renumbered the claims according to the request of the Office action. All pending claims now reflect the true and correct numbering sequence from 1 to 62 as referred to from here on forth.

By present amendment, claims 1, 36, 37, 40, 55, and 62 have been amended for clarification and not in view of the prior art. Applicants submit that the claims as filed were patentable over the prior art of record, and that the amendments herein are for purposes of clarifying the claims and/or for expediting

allowance of the claims and not for reasons related to patentability. Reconsideration is respectfully requested.

Applicants thank the Examiner for the interview held (by telephone) on March 15, 2005. During the interview, the Examiner and applicants' attorney discussed the claims with respect to the prior art. The essence of applicants' position is incorporated in the remarks below.

Prior to discussing reasons why applicants believe that the claims in this application are clearly allowable in view of the teachings of the cited and applied references, a brief description of the present invention is presented.

The present invention is directed to a new element object model and a vector graphics markup language for accessing element object models in a manner that allows program code developers to consistently interface with a scene graph data structure to produce graphics. The vector graphics markup language may comprise an interchange format for expressing vector graphics via the element object model. When interpreted, the markup may be parsed into data including elements in an element tree that is translated into the objects of a scene graph data structure. At the element tree level, a property system and layout system that may provide rich programmability features, including inheritance characteristics and eventing, making it straightforward for scene designers to design possibly complex scenes. In general, the vector graphics elements may correspond to shape elements and other elements including image and video elements that correlate with scene graph objects of the scene graph object model. The

properties and other resources of the vector graphics elements may also correlate with similar properties and resources the scene graph object model.

The vector graphics system may also program to an element level, in which each of the drawing shapes is represented as an element at the same level as the rest of the programmable elements in a page/screen, allowing interaction with the layout system, events and properties. The vector graphics system also may provide a mechanism for programming to a resource level, by which scene designers may essentially shortcut the element tree and layout system and program directly to the visual application programming interface layer that interfaces with the scene graph data structure. This provides a more efficient and lightweight way to output the appropriate object.

In one implementation, the markup code may be interpreted by a parser / translator which generally may add element-level elements to an element tree / property system and attaches data to those elements. The layout system then may take the element tree with the attached presenters and may translate the data to objects (via a builder) and calls to a visual application programming interface layer that may interface with the scene graph and creates the scene graph objects.

Note that the above description is for example and informational purposes only, and should not be used to interpret the claims, which are discussed below.

Rejections under §101

The Office action rejected claims 1-62 as being directed to non-statutory subject matter. Applicants respectfully disagree but have amended claims 1, 36, and 62 to more particularly point out and distinctly claim the subject matter of the

invention directed toward a computer-implemented method and a computer system.

Amended claim 1 recites a computer-implemented method that comprises receiving a function call, interpreting markup language data, and causing a change in a display. Amended claim 36 recites a computer system having a parser, an interface, a container, and a video interface. Additionally, amended claim 62 recites a computer system having an application programming interface means for receiving function calls comprising markup, parsing means for converting the markup to data corresponding to an object model associated with rendering graphics data; and rendering means for outputting the graphics data to a display. For at least these reasons, applicants submit that claims 1-62 are directed to statutory subject matter.

Rejections under §112

The Office action rejected claims 6-62 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as their invention. Specifically, The Office action questioned a number of terms in the claims regarding the definition to be used. Each of these terms is addressed below.

In claims 6-65, the term "visual" refers to a visual object that may contain visual information and that may be manipulated as an object in any well-known object-oriented programming environment.

In claim 15, the term "path" is addressed in the specification at page 24, lines 26-34. Specifically, the Path object provides the means to draw curves and

complex shapes, whether open or closed. Path exposes the properties generally available on objects that inherit from the Shape class, but also enables developers to specify more complex parameters to describe curves. Developers can use paths in markup in various ways, including specifying path data using a special syntax in the Data, or specify individual path segments using the PathGeometry and PathGeometry objects.

In claim 20, the term "interface" refers to its everyday common usage in the industry. That is, an interface may be a software or hardware construct that embodies a point at which two elements may work with each other to exchange information.

In claims 26 and 27, the word "context" is used within the term of a "drawing context" and should not be read as a separate element. A drawing context may be part of a visual object. The visual object may be manipulated by populating respective drawing contexts with various drawing primitives, including Geometry, ImageSource and MediaData. The term context does not appear in claim 4 as suggested by the Office action.

Claims 37 and 40 have been amended to recite the correct claim dependency.

In claim 39, the term "collection object" may be likened to a container object for the purposes of the examination as suggested by the Office action.

Rejections under §102

The Office action rejected claims 1 and 36 and all other pending claims as being anticipated by a mental process in a human being augmented with a pencil

and paper. MPEP §2106, *In re Prater* is cited. Applicants respectfully disagree. Nevertheless, claim 1 has been amended to recite a computer-implemented method. And claims 36 and 62 have been amended to recite a computer system. As a result, the recitations of these claims cannot be construed to be carried out by a mental process in a human being augmented with a pencil and paper. Applicants submit that independent claims 1, 36, and 62, and each of their dependent claims, are thus allowable.

Rejections under §103

Turning to the §103 rejections, amended claim 1 recites in a computing environment, a computer-implemented method comprising receiving a function call via an application programming interface, the function call comprising markup language data, interpreting the markup language data to cause data in a scene graph to be modified, and causing a change in a display in response to the modification of data in the scene graph.

The Office action rejected claim 1 as being unpatentable over Kim in view of Steele and in further view of SVG. More specifically, the Office action contends that the prior art of record teaches receiving a function call via an interface, the function call comprising markup language data. Paragraphs 0004 to 0008, 0020, and 0026 of Kim, Fig 2, item 210 of Steele, and the conversion process of SVG are all referenced. Further, the Office action contends that the prior art of record teaches interpreting the markup language data to cause data in a scene graph to be modified. Paragraphs 0007 to 0008 of Kim, Figs. 6 and 8 of Steele and SVG are again all referenced. The Office action acknowledges that Kim does not teach

the modification of data in the scene graph. The Office action, however, contends that Steele does teach this recitation and concludes that it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the graphics system of Steele with the SVG and graphics system of Kim because they serve complementary and supplementary purposes in how they handle graphics and animation. Applicants respectfully disagree.

To establish prima facie obviousness of a claimed invention, all of the claim recitations must be taught or suggested by the prior art; (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)), and "all words in a claim must be considered in judging the patentability of that claim against the prior art;" (*In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). Further, if prior art, in any material respect teaches away from the claimed invention, the art cannot be used to support an obviousness rejection. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed Cir. 1997). Moreover, if a modification would render a reference unsatisfactory for its intended purpose, the suggested modification / combination is impermissible. See MPEP § 2143.01

Kim is directed to a system for implementing a 3D virtual reality by using extensible 3D (X3D) data provided form a service server. In particular, the cited and applied sections of Kim teach a server that includes an applet for communicating with the server to receive X3D data, a communication module connected to the applet for providing a communication between the server and a client, and a browsing means for parsing the X3D data to construct a scene graph, rendering the scene graph, and displaying the scene graph. However, the cited

and applied sections of Kim teach a broad overview of virtual reality system that may include such "functions" as collision detection Walk, Slide, and Look. These functions as used in Kim are not function calls as used in the present invention and certainly cannot be construed to be a function call via an application programming interface.

Similarly, Steele is directed to a method and apparatus for providing rich content to media devices. In this method, information content is converted at a content provider system for transmission to a media device over a wireless communication network. The converted content is processed by a media engine on the media device. The content is converted at the content provider system into a binary format having separate visual elements and behavior elements. However, Steele also teaches a broad overview of a system and method that may implement a "function", such as receiving information from a user in response to a request for data. Again, these functions are not function calls and certainly cannot be construed to be a function call via an application programming interface.

Quite different from the prior art of record, claim 1 recites receiving a function call via an application programming interface. An application programming interface may be a set of routines used by an application program to direct the performance of procedures, for example, by a computer's operating system. In this embodiment, the application programming interface is operable to receive a function call that comprises markup language data. Such a function call that is in a markup language provides an interchange format for expressing vector graphics via the element object model. When interpreted, the markup may be parsed into

data including elements in an element tree that may be translated into the objects of a scene graph data structure. At the element tree level, a property system and layout system may provide rich programmability features, including inheritance characteristics and eventing, making it straightforward for scene designers to design possibly complex scenes.

Nowhere in any prior art of record can there be found a teaching or suggestion of a function call in a markup language received via an application programming interface. Applicants submit that the Office action has failed to establish a prima facie case of obviousness as all of the language in the recitations has not been either disclosed or suggested by the prior art of record.

Furthermore, the Office action contends that there is motivation to combine Kim with Steele because they both have graphics systems that are complementary and supplementary. This is erroneous logic. Simply showing that two graphics systems are complementary and supplementary is not evidence of motivation to combine the teachings. To use a similar example, a Windows operating environment and a UNIX operating system may be complementary and supplementary because each operating system may be considered to embody functionality that the other lacks. However, simply being complementary and supplementary would not render obvious a LINUX operating system that may perhaps embody the complementary features of both prior art operating systems. Such broad, conclusory statements do not come close to adequately addressing the issue of motivation to combine, are not evidence of obviousness, and therefore are improper as a matter of law. *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d

1614, 1617 (Fed. Cir. 1999). Further, if anything, the references teach away from such a combination, as discussed above. Applicants submit that there is no motivation to combine the teachings of Kim with the teachings of Steele.

For at least the foregoing reasons, applicants submit that claim 1 is allowable over the prior art of record.

Applicants respectfully submit that dependent claims 2-35, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 1 and consequently includes the recitations of independent claim 1. As discussed above, Kim, Steele and SVG, whether considered alone or in any permissible combination at law, fail to teach or suggest the recitations of claim 1 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 1 noted above, each of these dependent claims includes additional patentable elements.

Turing to the next independent claim, amended claim 36 recites in a computing environment, a computer system comprising a markup parser, an application programming interface coupling the markup parser to a source of markup, a container for visual information of an object model, the markup parser converting markup received at the application programming interface to method calls of objects in the object mode to modify data in the container for visual information, and an video interface operable to interpret the visual information for display on a display.

The Office action rejected claim 36 as being unpatentable over Kim in view of Steele and in further view of SVG. More specifically, the Office action contends

that Kim teaches a markup parser. Fig. 2, element 140 of Kim is referenced. Further, the Office action contends that Kim teaches an interface coupling the markup parser to a source of markup. Fig. 1 and Fig. 3 of Kim are referenced. Further yet, the Office action contends that Steele teaches a container for visual information of and object model, the markup parser converting markup received at the interface to method calls of objects in the object mode to modify data in the container for visual information. The Office action concludes that it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the graphics system of Steele with the SVG and graphics system of Kim because they serve complementary and supplementary purposes in how they handle graphics and animation. Applicants respectfully disagree.

Again, to establish prima facie obviousness of a claimed invention, all of the claim recitations must be taught or suggested by the prior art; (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)), and "all words in a claim must be considered in judging the patentability of that claim against the prior art;" (*In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). Further, if prior art, in any material respect teaches away from the claimed invention, the art cannot be used to support an obviousness rejection. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed Cir. 1997). Moreover, if a modification would render a reference unsatisfactory for its intended purpose, the suggested modification / combination is impermissible. See MPEP § 2143.01

As discussed above, Kim is directed to a system for implementing a 3D virtual reality by using X3D data provided form a service server. In particular the

cited and applied sections of Kim teach a service server that includes an applet for communicating with the service server to receive X3D data, a communication module connected to the applet for providing a communication between the service server and a client, and a browsing means for parsing the X3D data to construct a scene graph, rendering the scene graph and displaying the scene graph. However, the cited and applied sections of Kim teach a broad overview of virtual reality system that may include "functions" such as collision detection Walk, Slide, and Look. These functions are not method calls and certainly cannot be construed to be a method call via an application programming interface.

Similarly, Steele is directed to a method and apparatus for providing rich content to media devices are disclosed. In this method, information content is converted at a content provider system for transmission to a media device over a wireless communication network. The converted content is processed by a media engine on the media device. The content is converted at the content provider system into a binary format having separate visual elements and behavior elements. However, Steele also teaches a broad overview of a system and method that may implement a "function", such as receiving information from a user in response to a request for data. Again, these functions are not method calls and certainly cannot be construed to be a method call via an application programming interface.

Claim 36 recites an application programming interface coupling the markup parser to a source of markup. Further, claim 36 recites the markup parser converting markup received at the application programming interface to method

calls of objects. An application programming interface may be a set of routines used by an application program to direct the performance of procedures, for example, by a computer's operating system. In this embodiment, the application programming interface is operable to receive a method call that comprises markup language data. As such, a method call that is in a markup language provides an interchange format for expressing vector graphics via the element object model which makes it straightforward for scene designers to design possibly complex scenes.

Nowhere in any prior art of record can there be found a teaching of a method call in a markup language received via an application programming interface. Applicants submit that the Office action has failed to establish a prima facie case of obviousness as all of the language in the recitations has not been demonstrated by the prior art of record.

Furthermore, the Office action contends that there is motivation to combine Kim with Steele because they both have graphics systems that are complementary and supplementary. This is erroneous logic. Simply showing that two graphics systems are complementary and supplementary is not evidence of motivation to combine the teachings. Such broad, conclusory statements do not come close to adequately addressing the issue of motivation to combine, are not evidence of obviousness, and therefore are improper as a matter of law. *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Further, if anything, the references teach away from such a combination, as discussed above. Applicants

display.

The Office action rejected claim 62 for the same reasons as detailed above in the rejection of claim 36. Applicants respectfully disagree.

Claim 62 recites an application programming interface means for receiving function calls comprising markup. As discussed above, an application programming interface may be a set of routines used by an application program to

submit that there is no motivation to combine the teachings of Kim with the teachings of Steele.

For at least the foregoing reasons, applicants submit that claim 36 is allowable over the prior art of record.

Applicants respectfully submit that dependent claims 37-61, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 36 and consequently includes the recitations of independent claim 36. As discussed above, Kim, Steele and SVG, whether considered alone or in any permissible combination at law, fails to teach or suggest the recitations of claim 36 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 36 noted above, each of these dependent claims includes additional patentable elements.

Turning to the last independent claim, amended claim 62 recites In a computing environment, a computer system comprising application programming interface means for receiving function calls comprising markup, parsing means for converting the markup to data corresponding to an object model associated with rendering graphics data, and rendering means for outputting the graphics data to a display.

The Office action rejected claim 62 for the same reasons as detailed above in the rejection of claim 36. Applicants respectfully disagree.

Claim 62 recites an application programming interface means for receiving function calls comprising markup. As discussed above, an application programming interface may be a set of routines used by an application program to

direct the performance of procedures, for example, by a computer's operating system. In this embodiment, the application programming interface is operable to receive a function call that comprises markup. As such, a function call that is in a markup language provides an interchange format for expressing vector graphics via the element object model which makes it straightforward for scene designers to design possibly complex scenes.

Nowhere in any prior art of record can there be found a teaching of a function call in a markup language received via an application programming interface. Applicants submit that the Office action has failed to establish a prima facie case of obviousness as all of the language in the recitations has not been either disclosed or suggested by the prior art of record.

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For at least the foregoing reasons, applicants submit that claim 62 is allowable over the prior art of record.

For at least these additional reasons, applicants submit that all the claims are patentable over the prior art of record. Reconsideration and withdrawal of the rejections in the Office action is respectfully requested and early allowance of this application is earnestly solicited.

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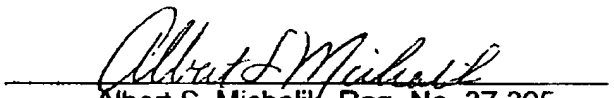
CONCLUSION

In view of the foregoing remarks, it is respectfully submitted that claims 1-62 are patentable over the prior art of record, and that the application is in good and proper form for allowance. A favorable action on the part of the Examiner is earnestly solicited.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney at (425) 836-3030.

Respectfully submitted,



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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this Amendment, along with transmittal and facsimile cover sheet, are being transmitted by facsimile to the United States Patent and Trademark Office in accordance with 37 C.F.R. 1.6(d) on the date shown below:

Date: April 18, 2005

Albert S. Michalik

3481 Amendment